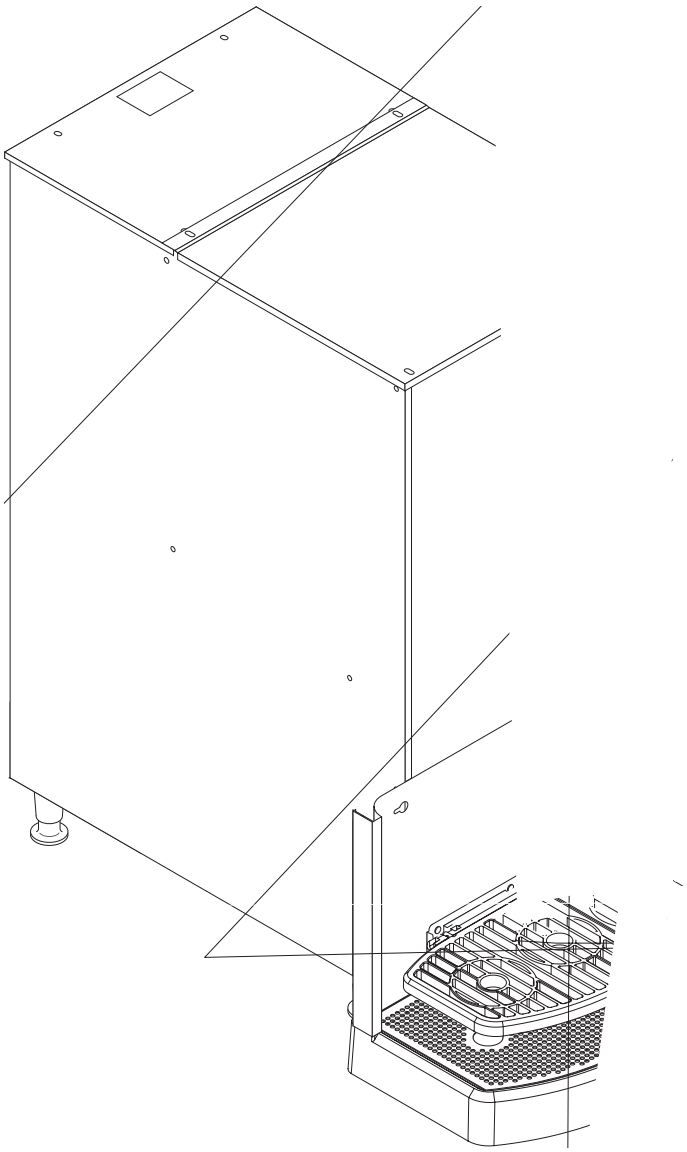
# LCA-2 IC



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## BUNN-O-MATIC COMMERCIAL PRODUCT WARRANTY

Bunn-O-Matic Corp. ("BUNN") warrants equipment manufactured by it as follows:
1) All equipment other than as specified below: 2 years parts and 1 year labor.
2) Electronic circuit and/or control boards: parts and labor for 3 years.
3) Compressors on refrigeration equipment: 5 years parts and 1 year labor.
4) Grinding burrs on coffee grinding equipment to grind coffee to meet original factory screen sieve analysis: parts and labor for 3 years or 30,000 pounds of coffee, whichever comes first.

These warranty periods run from the date of installation BUNN warrants that the equipment manufactured by it will be commercially free of defects in material and workmanship existing at the time of manufacture and appearing within the applicable warranty period. This warranty does not apply to any equipment, component or part that was not manufactured by BUNN or that, in BUNN's judgment, has been affected by misuse, neglect, alteration, improper installation or operation, improper maintenance or repair, damage or casualty. This warranty is conditioned on the Buyer 1) giving BUNN prompt notice of any claim to be made under this warranty by telephone at (217) 529-6601 or by writing to Post Office Box 3227, Springfield, Illinois 62708-3227; 2) if requested by BUNN, shipping the defective equipment prepaid to an authorized BUNN service location; and 3) receiving prior authorization from BUNN that the defective equipment is under warranty.

**THE FOREGOING WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ANY OTHER WARRANTY, WRITTEN OR ORAL, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF EITHER MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** The agents, dealers or employees of BUNN are not authorized to make modifications to this warranty or to make additional warranties that are binding on BUNN. Accordingly, statements by such individuals, whether oral or written, do not constitute warranties and should not be relied upon.

If BUNN determines in its sole discretion that the equipment does not conform to the warranty, BUNN, at its exclusive option while the equipment is under warranty, shall either 1) provide at no charge replacement parts and/or labor (during the applicable parts and labor warranty periods specified above) to repair the defective components, provided that this repair is done by a BUNN Authorized Service Representative; or 2) shall replace the equipment or refund the purchase price for the equipment.

**THE BUYER'S REMEDY AGAINST BUNN FOR THE BREACH OF ANY OBLIGATION ARISING OUT OF THE SALE OF THIS EQUIPMENT, WHETHER DERIVED FROM WARRANTY OR OTHERWISE, SHALL BE LIMITED, AT BUNN'S SOLE OPTION AS SPECIFIED HEREIN, TO REPAIR, REPLACEMENT OR REFUND.**

In no event shall BUNN be liable for any other damage or loss, including, but not limited to, lost profits, lost sales, loss of use of equipment, claims of Buyer's customers, cost of capital, cost of down time, cost of substitute equipment, facilities or services, or any other special, incidental or consequential damages.

# INTRODUCTION

The Liquid Coffee Ambient Iced Coffee Dispenser (LCA-2 IC) delivers two types of coffee. The dispenser can be set up for continuous draw (by the cup) for self-serve applications, or portion-control to fill carafes and decanters for wait staff.

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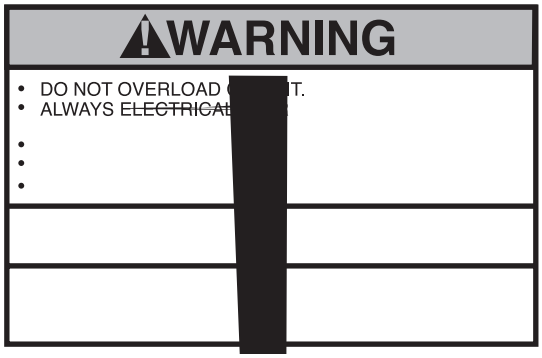
## USER NOTICES

Carefully read and follow all notices on the equipment and in this manual. They were written for your protection. All notices are to be kept in good condition. Replace any unreadable or damaged labels.

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## ELECTRICAL REQUIREMENTS

**CAUTION:** The dispenser must remain disconnected from the power source until specified in Electrical Hook-Up.

The LCA-2 IC dispenser is supplied with a 120-volt / 15 Amp cord set and requires a 2-wire, grounded, individual branch circuit rated for 120 volts AC, 15 amp, single phase, 60Hz. The mating connector must be a NEMA 5-15R.

## PLUMBING REQUIREMENTS

The dispenser may be connected to a cold water system with operating pressure between 20 and 90 psi (138 and 620 kPa) from a 1/2" or larger supply line. A shut-off valve should be installed in the line before the dispenser. Install a regulator in the line when pressure is greater than 90 psi (620 kPa) to reduce it to 50 psi (345 kPa). The water inlet fitting is 3/8" flare. Dispensers set up to deliver to 1.8 Oz./sec. (53.2 ml/sec) per dispense tip, require a water supply source that can deliver a minimum of 1.7 gpm (6.4 lpm) at the inlet fitting.
NOTE: Bunn-O-Matic recommends 3/8" tubing from the 1/2" water supply line. At least 18 inches of FDA approved flexible beverage tubing, such as reinforced braided polyethylene or silicone, before the dispenser will facilitate movement to clean the counter top. It can be purchased direct from Bunn-O-Matic (part number 00326.0000). Bunn-O-Matic does not recommend the use of a saddle valve to install the dispenser. The size and shape of the hole made in the supply line by this type of device may restrict water flow.

**This equipment must be installed to comply with the Basic Plumbing Code of the Building Officials and Code Administrators International, Inc. (BOCA) and the Food Service Sanitation Manual of the Food and Drug Administration (FDA). For models installed outside the U.S.A., you must comply with the applicable Plumbing/Sanitation Code for your area.**

## INITIAL SET-UP

**NOTE:** The LCA-2 IC weighs approximately 70 lbs. (31.8 kg). If necessary, use more than one person when lifting or moving the dispenser.

1. Locate and remove the information packets and tube kits from top of packaging and set aside.
2. Remove foam packing and cut around the bottom of box.
3. Remove the box and the rest of the foam packing.
4. Open the dispenser door and remove the drip tray and the lower splash guard panel.
5. Set dispenser on the counter where it is to be used. **CAUTION: DO NOT LIFT ON THE DOOR.**
6. Confirm the dispenser is level on the counter.

## ELECTRICAL HOOK-UP

**CAUTION:** Improper electrical installation will damage electronic components.

1. An electrician must provide electrical service as specified in conformance with all local, state and federal electrical codes.
2. Using a voltmeter, check the voltage and color-coding of each conductor at the electrical source.
3. Connect the dispenser to the power source.
4. If plumbing is to be hooked up later, be sure the dispenser is disconnected from the power source. If plumbing has been hooked up, the dispenser is ready for Initial Power-Up.

## PLUMBING HOOK-UP

1. Flush the water line to remove any debris or foreign material.
2. Securely attach the water line to the 3/8" flare fitting, on bottom right side of the dispenser.
3. Turn on the water supply and check for leaks.

## DISPENSER FLOW RATE

The dispenser comes from the factory with flow rate set at 1.8 oz./sec (53.2 ml/sec).

# SELECTING THE CORRECT PUMP TUBING

There are two pump tube sizes available for use with this dispenser. Look up the recommended tube size for the mix ratio of your concentrate, refer to the *Tube Selection Chart.*

| TUBE SELECTION CHART | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Dispense Rate** | **Concentrate Ratios** | | | | | | | | | | | | | | | |
| | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 |
| **1.8 Oz/sec.** (53 ml/sec.) | **3/16" I.D. TUBING** | | | | **1/8" I.D. TUBING** | | | | | | | | | | | |

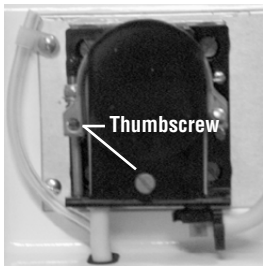
Example:

For a Dispenser Flow Rate of 1.8 Oz./sec (53 mL/sec) and a Mix Ratio of 60:1 – use 1/8" I.D. Tubing.

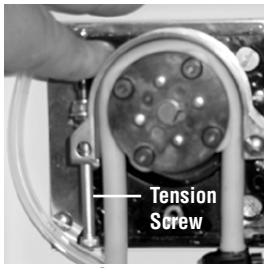
Tube kits can be purchased from BUNN-O-MATIC.
Part # 34727.1000 for 3/16" I.D. Tubing or #34728.1000 for 1/8" I.D. Tubing.

**INSTALLING THE PUMP TUBING** (Refer to the *Tubing Installation Instructions* in side the cabinet door for details.)

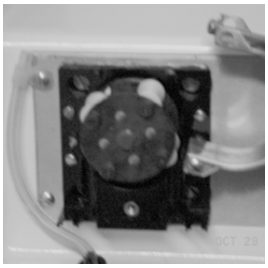
1. Loosen the thumbscrew securing the tubing retainer plate to the pump housing. Set it and the retainer plate aside.
2. Depress the tension screw and remove it from the notch in the pump body, releasing the spring tension on the pump band.
3. Apply lubricant (BUNN-O-MATIC part number M2548.1000) to the new pump tubing.
4. Insert the tubing onto the mix chamber port and wrap the tubing around the pump rotor, making sure that the elbow and clamps end up on the bottom side of the pump body.
5. Close the compression band reinsert the tension screw into the notch in the pump housing.
6. Replace the tubing retainer plate and tighten the thumbscrew.
7. Reconnect bag connector to the product box.
8. Repeat steps 1 through 7 for the other pump.
9. Prime the pumps. Refer to *Priming the Concentrate Lines* section.

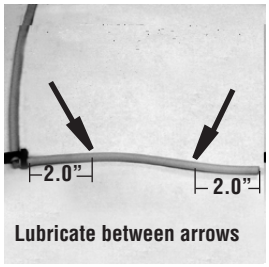


Remove Retaining Plate

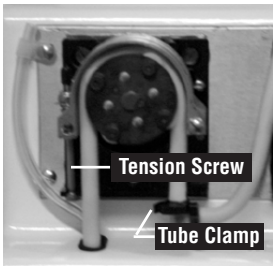


Release Spring Tension

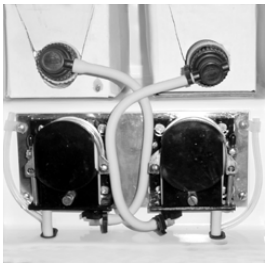

Remove Tubing



Lubricate New Tube



Install New Tubing

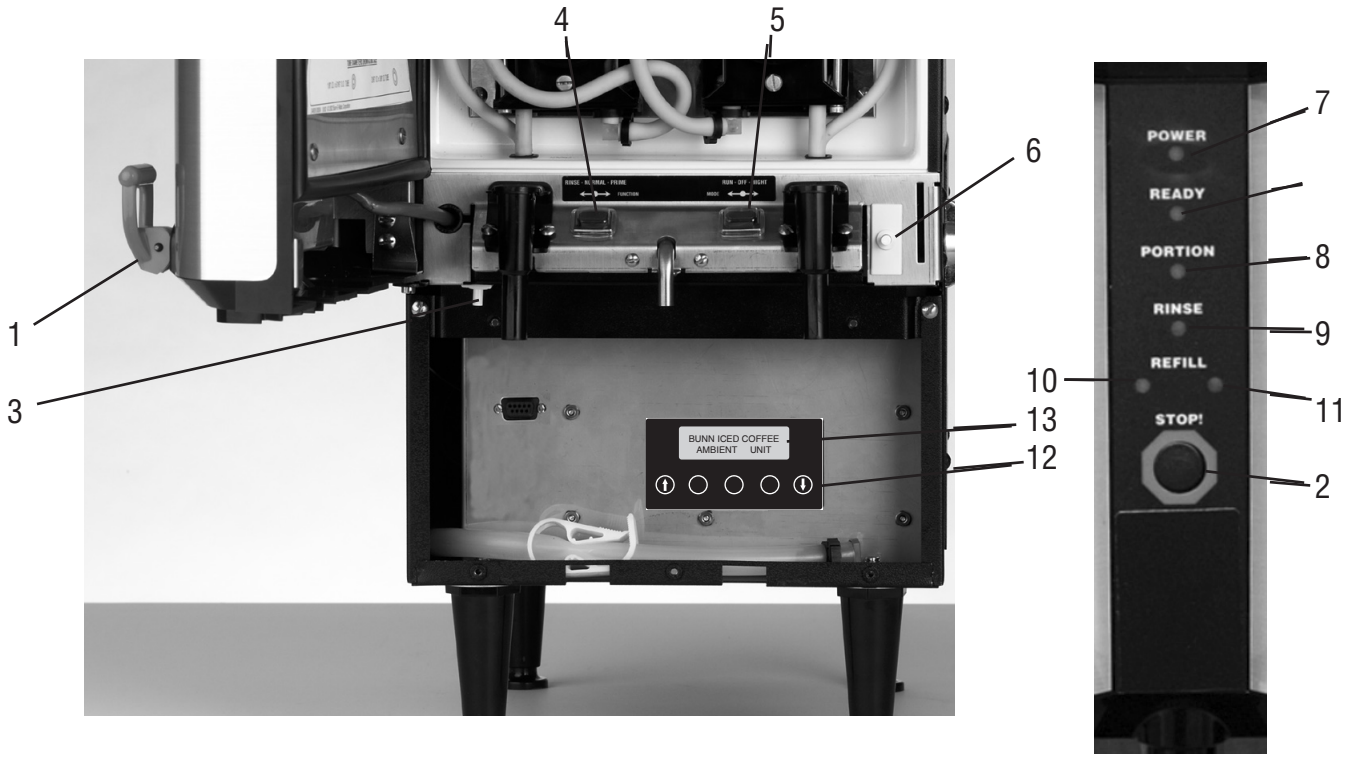

Completed Installation

# OPERATING CONTROLS AND INTERFACE

1. Dispense Switches: Pull and Hold to dispense product.
2. Stop Switch: Momentary switch stops all dispense functions.
3. Alternate Portion Control Switch: Momentarily pushed to select the Alternate Portion Control Volume.
4. Function Selector Switch: Allows the user to set the dispenser into different dispensing modes.
   a. Rinse: Dispenses water only- Flushes the mix chamber and dispense tip.
   b. Prime: Dispenses concentrates only – Primes the concentrate pump.
   c. Normal: Normal dispense mode - Dispenses mixed product (concentrate and water).
5. Mode Selector Switch: Allows the user to set the dispenser into different operating modes.
   a. Run: Normal operating position.
   b. Off: Turns off all functions.

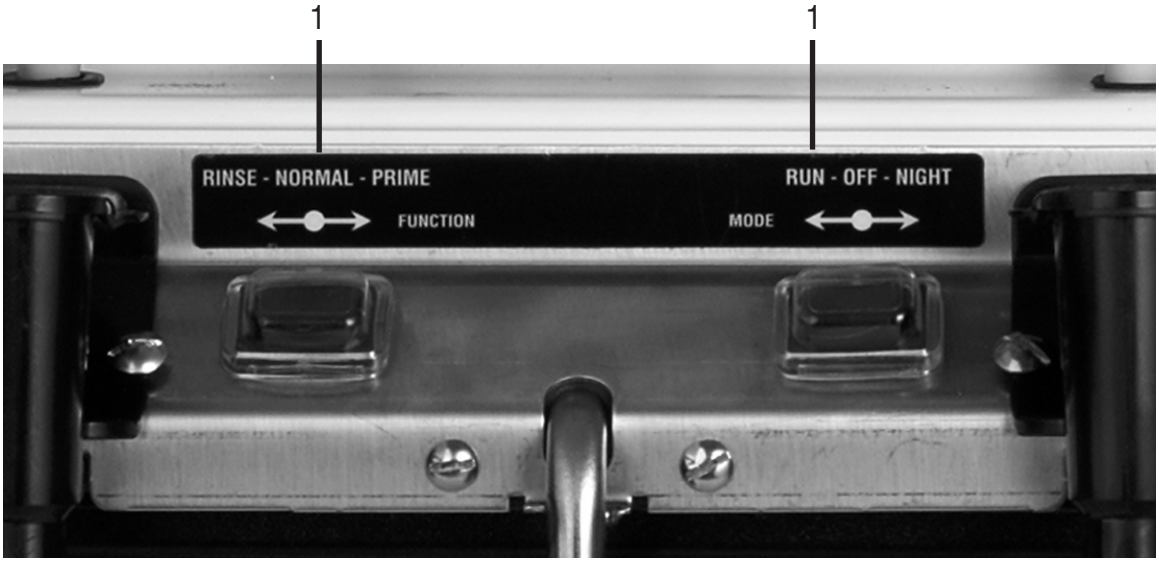
**WARNING -** The OFF Mode does not remove AC power from the dispenser. Disconnect power source before servicing the dispenser

   c. Night: Anti-pilfering mode that disables dispensing.
6. Door Interlock Switch: Unit will not dispense product if the door is open.
7. Power LED: Red - illuminates when AC power is applied to dispenser.
8. Portion LED: Yellow - illuminates when the portion dispense option has been selected, (5 second delay).
9. Rinse LED: Yellow - illuminates when the optional preset rinse alarm time has elapsed.
10. Left Refill LED: Yellow - illuminates when the Left Concentrate BIB needs replaced.
11. Right Refill LED: Yellow - illuminates when the Right Concentrate BIB needs replaced.
12. Programming Keypad: Used in conjunction with the LCD display to program and calibrate the dispenser to customer specific requirements. *(Located behind the splash guard panel)*
13. LCD Display: Displays programming menus and fault messages. *(Located behind the splash guard panel)*



## INITIAL POWER-UP

1. Select **Normal** on the Function Selector Switch and **Run** on the Mode Selector Switch.
2. Confirm the water supply is on.
3. Connect the dispenser to the power source. The Red POWER LED will illuminate and the machine will be ready for Programming as described in *Programming Functions & Basic Operations.*



## Rinse Alarm Feature

Periodic rinsing of the mix chambers and dispense tips is essential for proper maintenance and optimum performance of the dispenser. The automated Rinse Alarm feature has three levels of operation, Disabled, Warning Only and Warning with Brew Lockout, see chart for details.

| **Alarm Level Selected** | **Alarm Mode** |
|---|---|
| Disabled | None |
| Warning Only | Rinse LED will come on 4 hrs prior to the selected time interval and remain on until the Rinse procedure has been performed. The dispenser will continue to serve product. |
| Warning w/ Brew Lockout | Rinse LED will come on 4 hrs prior to the selected time interval and remain on until the Rinse procedure has been performed. The dispenser will Lockout and not continue to serve product once the selected time interval has elapsed. |

**NOTE:** The time interval between Rinses is adjustable from 8 to 24 hrs.

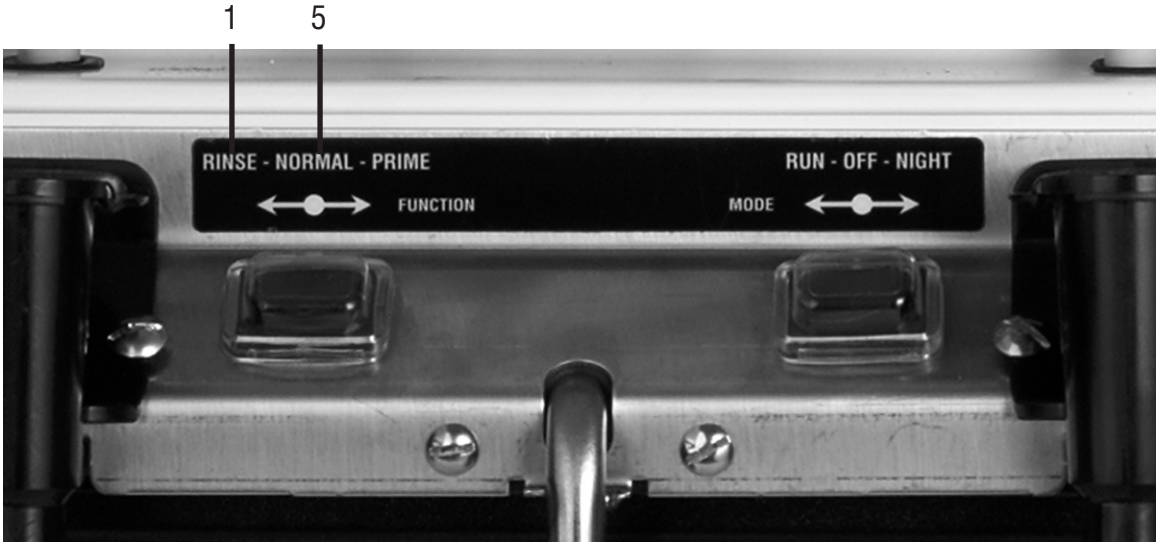
The dispenser is shipped with the automated Rinse Alarm disabled, (No Alarm). It is up to the user to determine the Rinse time interval and the level of warning required, based on their application and maintenance procedures. To enable the automated Rinse Alarm feature, refer to RINSE ALARM ? in *Programming the Dispenser.*

Rinse Procedure:

1. Open the cabinet door and select **Rinse** on the Function Selector switch – close the door.
2. Place a 2 Liter (1/2 Gal) container under the Left dispense tip.
3. Activate the Left dispenser until water flow stops automatically, approximately 20 sec.
4. Repeat Steps 2 & 3 for the Right dispense tip.

The Rinse LED will turn OFF, when the Rinse procedure has been satisfied for both sides.

5. Open the cabinet door and select **Normal** on the Function Selector switch – close the door.




## BIB Empty Lockout Feature

The dispenser can be set to not dispense product when the concentrate BIB is empty. To enable this feature, first calibrate the Empty BIB Threshold *(refer to Field Calibrating the Empty BIB Warning)*. Then enable the BIB Empty Lockout feature *(refer to the BIB Empty Lockout menu in Programming the Dispenser)*. The dispenser will now Lockout dispensing and flash the Right or Left "REFILL LED" corresponding to the empty BIB. Once the BIB has been replaced, PRIME the concentrate line *(refer to Priming the Concentrate Lines)* and then dispense mixed product until the "REFILL LED" goes out. NOTE: If the dispenser fails to clear the BIB Empty Lockout, repeat the Priming operation a second time to insure the concentrate is flowing properly.

# PROGRAMMING THE DISPENSER

Remove the lower splash guard assembly to access the digital programming module with LCD display.
Press the Down Arrow key to enter the programming menu.
Use the Up and Down Arrow keys to scroll through the menu screens.
Select Exit to leave the programming function and return to normal operations.
**NOTE 1:** Flashing menu items indicate which selection is active.
**NOTE 2:** Values shown below are the factory default values for English units.
**NOTE 3:** Values in [X - X] are the Min. and Max. for that function.

| MENU SCREEN | ACTION | DESCRIPTION |
|---|---|---|
| **L DISPENSE RATIO (-) 35:1 (+)** | Use the (+) or (-) buttons to adjust the Mix Ratio | Enter the desired Mix Ratio for the concentrate used in the Left dispenser. [20:1 - 100:1] |
| **SET LF TUBE SIZE 1/8 EXIT 3/16** | Select tube size. *Size selected will flash ON/OFF.* | Select Pump Tube Size to be used in the Left metering pump, (see *Tube Selection Chart*) |
| **R DISPENSE RATIO (-) 35:1 (+)** | Use the (+) or (-) buttons to adjust the Mix Ratio | Enter the desired Mix Ratio for the concentrate used in the Right dispenser. [20:1 - 100:1] |
| **SET RT TUBE SIZE 1/8 EXIT 3/16** | Select tube size. *Size selected will flash ON/OFF* | Select Pump Tube Size to be used in the Right metering pump, (see *Tube Selection Chart*) |
| **LF DISP VOLUME (-) 4.0oz (+)** | Use the (+) or (-) buttons to adjust the Left portion volume | Set the volume to be dispensed during a Left Portion controlled dispense to: [0 - 640 Oz.] or [0 - 18.93L] |
| **RT DISP VOLUME (-) 4.0oz (+)** | Use the (+) or (-) buttons to adjust the Right portion volume | Set the volume to be dispensed during a Right Portion controlled dispense to: [0 - 640 Oz.] or [0 - 18.93L] |

| MENU SCREEN | ACTION | DESCRIPTION |
|---|---|---|
| **LF PRODUCT DISP .0GAL RESET?** | Select (RESET) to clear total | Selecting Reset will clear the Current accumulated volume of mixed product dispensed through the Left dispenser. Gal (Liters) |
| **LF PRODUCT DISP .0GAL** | NONE | Displays the Total accumulated volume of mixed product dispensed through the Left dispenser. Not Re-settable. Gal (Liters) |
| **RT PRODUCT DISP .0GAL RESET?** | Select (RESET) to clear total | Selecting Reset will clear the Current accumulated volume of mixed product dispensed through the Right dispenser. Gal (Liters) |
| **RT PRODUCT DISP .0GAL** | NONE | Displays the Total accumulated volume of mixed product dispensed through the Right dispenser. Not Re-Settable. Gal (Liters) |

**The following functions can be Password Protected. If you wish to prevent others from accessing these functions, enter a 4 digit code of your choice. Record your password code [_ _ _ _], as you will need it to access these functions in the future.**

| | | |
|---|---|---|
| **ENTER PASSWORD (-) 0 (+)** | Use the (+) or (-) buttons to enter password. | Enter the access Code to view the remaining functions. Factory Default = 0. |
| **SET PASSWORD ? (-) 0 (+)** | Use the (+) or (-) buttons to change the password. | Enter your own Code to prevent access to the remaining functions. [0 to 9999] |
| **SELECT UNITS ENG EXIT METRIC** | Select the preferred units | Used to select the preferred units of measurement. (Oz., Gal, deg F) or (mL, L, deg C) |
| **CHILLED UNIT ? NO EXIT YES** | Select (NO) | Default to NO. This option is not applicable for Iced Coffee models. |
| **RINSE ALARM ? NO EXIT YES** | Select (YES) or (NO) | Selecting Yes will enable the Rinse Alarm function, (see *Rinse Alarm*) |

If NO - go to BIB EMPTY LOCKOUT menu.

| MENU SCREEN | ACTION | DESCRIPTION |
|---|---|---|
| **RINSE TIME ?<br>(-) 12 Hrs (+)** | Use the (+) or (-) buttons to adjust Rinse Alarm delay | Enter the desired time between required Rinse Cycles in hours, [8 - 24 hrs.] |
| **RINSE LOCKOUT ?<br>NO EXIT YES** | Select (YES) to enable | Select YES to Lockout dispensing until the Rinse Alarm has been cleared. Default is NO |
| **BIB EMPTY LOCKOUT<br>NO EXIT YES** | Select (YES) to enable | Select YES to Lockout dispensing until the Concentrate BIB has been replaced. Default is NO |
| **DLY REPEAT DISP<br>(-) 0 SEC (+)** | Use the (+) or (-) buttons to adjust the Delay Time | Enter the desired time delay before allowing the next dispense to take place, [0 - 10 sec.] |

The following functions are for diagnostic and troubleshooting purposes and typically do not have to be adjusted. Contact your local service agent for assistance before making changes to these functions.

| | | |
|---|---|---|
| **CAL LEFT SIDE ?<br>EXIT YES** | Select (YES) to enable | Selecting Yes will enable the Left Dispenser Calibration routine, (see *Field Calibration* before attempting to calibrate the dispenser). |

If NO - go to CAL RIGHT SIDE menu.

| | | |
|---|---|---|
| **CAL LEFT PUMP ?<br>PULL DISPENSE** | Place a 50 mL (#34843.1000) graduated cylinder under the Left dispense tip, then activate the Left Dispenser | The Left Pump will dispense concentrate for 20 seconds, then shut off automatically. Collect and measure the concentrate dispensed. |
| **CAL LF PUMP VOL<br>(-) 43mL (+)** | Use the (+) or (-) buttons to enter volume collected | Enter the volume of concentrate measured from the Left Pump in mL, (not Oz.) regardless of Preferred Units selected. |
| **CAL LF WTR FLOW ?<br>PULL DISPENSER** | Place a 64 Oz. (2000 mL) container under the Left dispense tip, then activate the Left Dispenser | The Left Dispenser will dispense hot water for 20 seconds, then shut off automatically. Collect and measure the water dispensed. |

| MENU SCREEN | ACTION | DESCRIPTION |
|---|---|---|
| **CAL LF WTR VOL (-) 36.0OZ (+)** | Use the (+) or (-) buttons to enter volume collected | Enter the volume of the water measured from the Left dispenser in Oz. (mL). |
| **CAL LEFT SIDE ? EXIT YES** | NONE | Scroll down to bypass this screen. |
| **CAL RIGHT SIDE ? EXIT YES** | Select (YES) to enable Calibration routine. | Selecting Yes will enable the Right Dispenser Calibration routine, (see *Pump Calibration*) prior to calibrating the dispenser. |
| **CAL RIGHT PUMP ? PULL DISPENSER** | Place a 50 mL (#34843.1000) graduated cylinder under the Right dispense tip, then activate the Right Dispenser | The Right Pump will dispense concentrate for 20 seconds, then shut off automatically. Collect and measure the concentrate dispensed. |
| **CAL RT PUMP VOL (-) 43mL (+)** | Use the (+) or (-) buttons to enter volume collected | Enter the volume of concentrate measured from the Right Pump in mL(not Oz.) regardless of Preferred Units selected. |
| **CAL RT WTR FLOW PULL DISPENSER** | Place a 64 Oz. (2000 mL) container under the Right dispense tip, then activate the Right Dispenser | The Right Dispenser will dispense hot water for 20 seconds, then shut off automatically. Collect and measure the water dispensed. |
| **CAL RT WTR VOL (-) 36.0OZ (+)** | Use the (+) or (-) buttons to enter volume collected | Enter the volume of the water measured from the Right dispenser in Oz. (mL) |
| **CAL RIGHT SIDE ? EXIT YES** | NONE | Scroll down to bypass this screen. |

| MENU SCREEN | ACTION | DESCRIPTION |
|---|---|---|
| **BIB EMPTY -> 250<br>(-) EXIT (+)** | Use the (+) or (-) buttons to adjust empty BIB threshold | Used to set the Conductance Threshold for the Empty BIB warning. Default is 250 |
| **WTR START DELAY<br>(-) .15SEC (+)** | Use the (+) or (-) buttons to adjust delay time | Dispense Valve ON Delay. Eliminates weak mix at the beginning of a dispense. |
| **WTR STOP DELAY<br>(-) .15SEC (+)** | Use the (+) or (-) buttons to adjust delay time | Dispense Valve OFF Delay. Flushes the mix chamber at the end of a dispense. |
| **TEST LED'S ?<br>NO EXIT YES** | Select (YES) or (NO) | LED diagnostics. Selecting YES will light all Front Door LED's. |
| **TEST SWITCHES ?<br>UseSwitchToTest** | NONE | Switch Diagnostic: Activate switches separately to test. Display will indicate which Switch has been activated. NOTE: Door Interlock switch must be held closed. |
| **ENTER ASSET #<br>(-) 000000 (+)** | Use the (+) or (-) buttons to adjust the ASSET NUMBER | Allows the user the option of entering an Asset Number. Default is 000000 |
| **SERIAL #<br>LCR 0000000** | NONE | Displays the manufacture's Serial Number (should be identical to the Serial Number on the machine Data Plate) |
| **FACTORY DEFAULTS<br>NO YES** | Select (YES) or (NO) | **CAUTION**: Selecting YES will RESET all Programming Functions to the Factory Default settings. |

## LOADING THE CONCENTRATE

1. Thoroughly mix concentrate by vigorously shaking the product Bag-In-Box (BIB).
2. Pull the BIB connector through the hole provided in the box and place it on the drip tray with the connector facing up. (See Fig. 1)
3. Open the dispenser door and locate the appropriate left or right BIB Adapter fitting.
4. Pull the Adapter fitting down and connect it to the BIB. (See Fig. 2)
5. Place the BIB upright in the machine, rotating it into position with the connector facing forward.
6. Rotate the BIB Adapter to avoid sharp bends in the tubing and allow it to be routed between the two pumps.
   Refer to the *Tube Installation Decal* on the door for proper routing. (See Fig. 3)
7. Close the cabinet door.

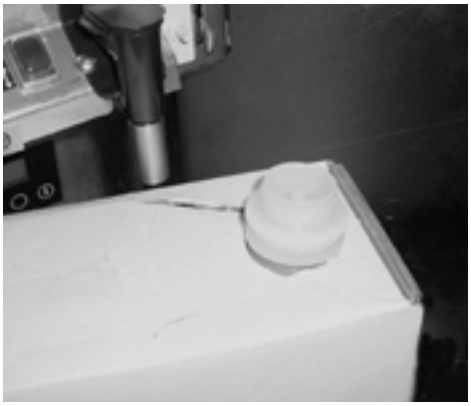


**Fig. 1**

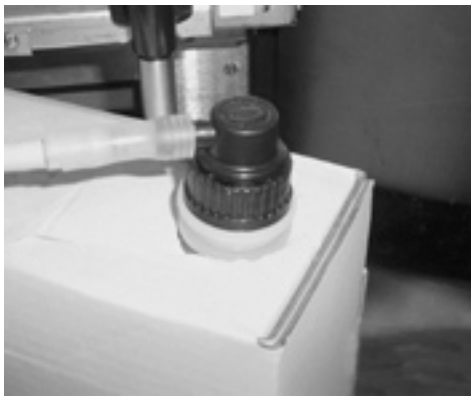


**Fig. 2**

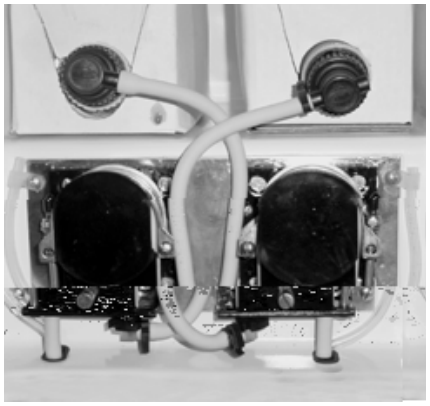
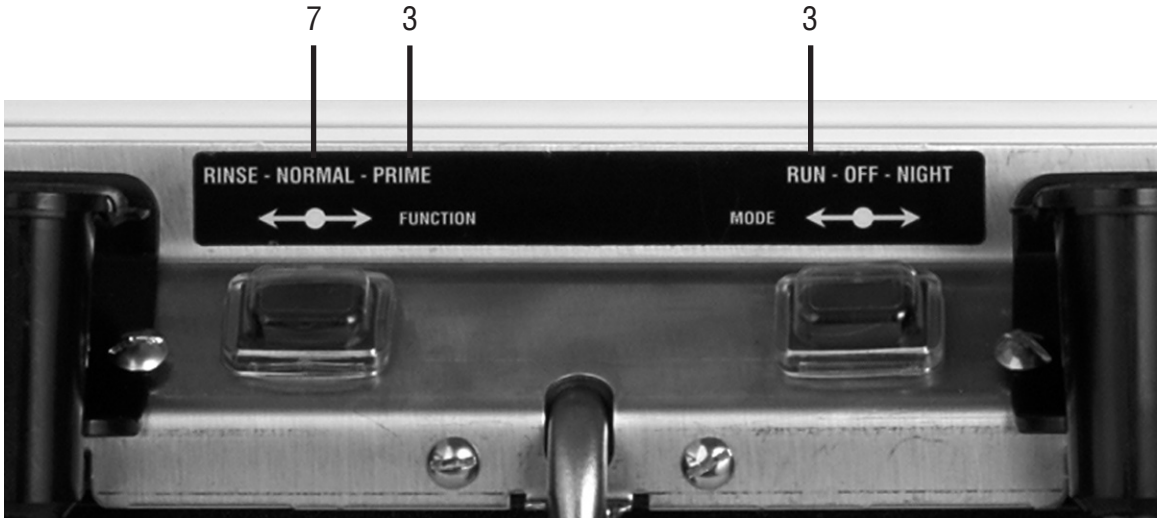


**Fig. 3**

## PRIMING THE CONCENTRATE LINES

1. Open the dispenser door.
2. Load concentrate per instructions in the section titled *Loading the Concentrate*.
3. Select **Prime** on the Function Selector Switch and **Run** on the Mode Selector Switch.
4. Close the dispenser door.
5. Place a container under the appropriate dispense tip.
6. Activate the appropriate dispenser until concentrate flows from the dispense nozzle. Priming may take 5 to 10 seconds.
7. Open the dispenser door, select **Normal** on the Function Selector Switch, and then close door.

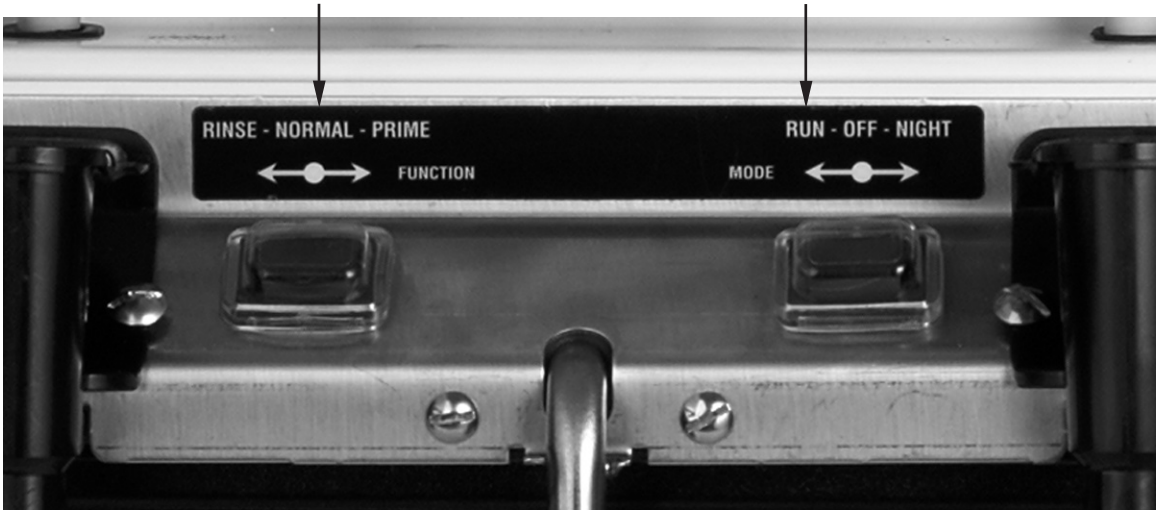
**Note:** Concentrate may continue to drip out of dispense tip. The user may wish to run a Rinse Cycle (refer to *Rinsing*) after Priming the dispenser to clean out the remaining concentrate.



# OPERATING THE PULL & HOLD DISPENSER

Set the Function Selector Switch to **Normal** and the Mode Selector Switch to **Run**.

1. Pull and Hold Dispense Mode (Cup at a time)
   a. Place cup on the cup tray beneath the desired dispensing tip. For a large container, flip the cup tray up and place the container on top of the drip tray.
   b. Pull and Hold the corresponding dispense handle until the cup or other container is full.
   c. Remove cup or container.
2. Portion Dispense Mode (Preset volume dispensing) Refer to *Programming Functions* on how to set this volume.
   a. Place the appropriate size container beneath the desired dispensing tip. For large containers, flip the cup tray up and place the container on top of the drip tray.
   b. Momentarily press the Portion Switch. The Portion LED will illuminate for 5 seconds after the Portion Switch is pressed.
   c. Momentarily pull the corresponding dispense handle, then release. If the user waits longer than 5 seconds to pull the handle, the dispenser will default back to the Pull & Hold Mode. Portion Dispense Mode can be disabled at any time during the portion dispense by either momentarily pulling the Dispense Handle again or pressing the Stop button.
   d. Wait for container to fill and the dispenser to quit dispensing, then remove container.




**Filling Cambros or other large containers:**

The dispenser is designed primarily for cups or other small containers that will fit under the dispense tips. However, it may be used to fill larger containers (up to 2 Gal) by use of an extension hose on the dispense tip. Care must be taken to insure that the mixed product flows freely from the dispense tip into the container.

1. Use a 5/8" I.D. or larger, NSF (National Sanitation Foundation) approved hose.
2. Use as short a hose as possible with no loops, bends or kinks in it.
3. Insure that the outlet of the hose is below the dispense tip and that the mixed product flows freely into the container

A properly sized and positioned hose will not run full or back up into the dispense tip. Failure to follow these directions can alter the mix ratio and/or cause flooding of the vent tube.

Refer to *Programming the Dispenser* to set the LF and RT Disp Volumes to the desired amount.

# CLEANING & PREVENTATIVE MAINTENANCE

**General Cleaning and Sanitizing Procedures**

**Note:** The BUNN® Liquid Coffee Dispenser incorporates a "user selectable" rinse reminder feature, which lights the Rinse LED on the front panel and disables dispensing when it is time to rinse. See *Programming Functions* to activate this feature.

**Daily: RINSING**

1. Open the dispenser door.
2. Select **Rinse** on the Function Selector Switch and **Run** on the Mode Selector Switch.
3. Close the dispenser door.
4. Place a 1/2 gal (2 liter) container under the appropriate dispense nozzle or nozzles.
5. Activate the Dispenser of the appropriate side or sides for approximately twenty seconds or until the water is clear or has no concentrate coloring in it.
6. Open the dispenser door, select **Normal** on the Function Selector Switch, and then close door.

**Note:** To clear the "Rinse" alarm, activate each dispenser until the flow stops automatically (approx. 20 seconds for each tip). The "Rinse" alarm LED will turn off when the Rinse Procedure has been satisfied for both sides.

**Daily: PARTS WASHING**

1. Remove and wash the drip tray, drip tray cover, and cup tray in a mild detergent solution. Rinse thoroughly.
2. Wipe splash panel, area around dispense nozzles, door, and cabinet with a clean damp cloth.

**Weekly: SANITIZING**

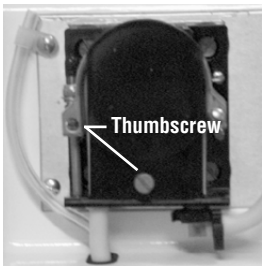
1. Open the dispenser door.
2. Select **Prime** on the Function Selector Switch and **Run** on the Mode Selector Switch.
3. Remove the bag connector from the product box and disassemble or prop open the internal valve to allow free flow of product through the connector. **NOTE:** Cutting the mating fittings from an empty bag makes an excellent "free flowing" connector for this purpose.
4. Place the bag connector into a one-gallon (3.8 liter) container of warm soapy tap water 140°F (60°C).
5. Place an empty container under dispense tip and activate the corresponding Dispenser until the clean soapy water is dispensed from the dispense tip.
6. Repeat steps 4 and 5 with warm tap water 140°F (60°C) to rinse the soapy water from the pump tubing. Continue dispensing until the water is clear, and no soapy water is being dispensed.
7. Prepare 2.5 gallons (9.46L) of sanitizing solution by dissolving 1 packet of Kay 5 sanitizer into 2.5 gallons (9.46L) of 120°F (48.9°C) water to ensure 100 ppm of available chlorine.
8. Again, repeat steps 4 and 5 with the sanitizing solution. Once sanitizing solution is being dispensed, stop dispensing and allow the solution to sit for 5 minutes.
9. Repeat step 6 to flush out the sanitizing solution from the pump tubing.
10. Remove the mating connector from the bag connector.
11. Reattach the bag connector to product box.
12. Select **Normal** on the Function Selector Switch and **Run** on the Mode Selector Switch.
13. Activate the Dispenser until concentrate/water mixture appears. Then dispense one 12 ounce (354.9 ml) glass of concentrate/water mixture and discard.
14. Repeat steps 1 through 13 for other dispense head.
15. Wipe internal and external surfaces with a clean, damp cloth.

# REPLACING THE PUMP TUBING

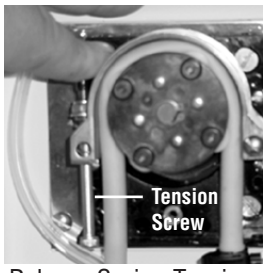
The pumps and tubing used in the dispenser are designed to give maximum performance and long life. However, the tubes are a wear item and must be replaced periodically. How long the tubes last is dependent on usage and properties of the concentrate. Excessive wear will reduce the output of the pumps resulting in a weak mixed beverage. Bunn-O-Matic recommends replacing the Pump Tubing a minimum of once every 6 months or sooner if warranted.

Refer to the *Tube Replacement Instruction* on the Cabinet door for details.

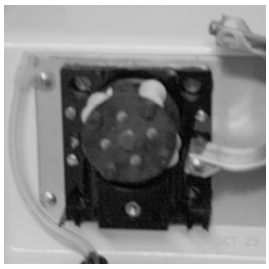
1. Rinse the pump tubing with warm tap water (Refer to steps 1 - 5 of the *Weekly Sanitizing instructions*) prior to removing the tubes to avoid concentrate spills.
2. Loosen the thumbscrew securing the tubing retainer plate to the pump housing. Set it and the retainer plate aside.
3. Depress the tension screw and remove it from the notch in the pump housing, releasing the spring tension on the pump band.
4. Open the compression band and gently pull the pump tube from around the pump's rotor.
5. Inspect the pump bands for signs of wear. Replace if necessary.
6. Apply lubricant (BUNN-O-MATIC part number M2548.1000) to the new pump tubing's rotor side.
7. Insert the tube onto the mix chamber port, then wrap the new tubing around the pump rotor, making sure that the elbow and clamps end up on the bottom side of the pump housing.
8. Depress the tension screw and insert it in the notch in the pump body, reapplying spring tension on the pump band.
9. Replace the tubing retainer plate and tighten the thumbscrew.
10. Repeat steps 1 through 9 for the other pump.

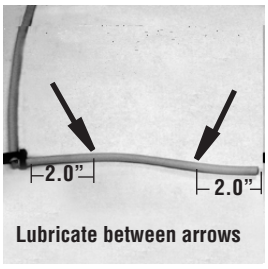


Remove Retaining Plate

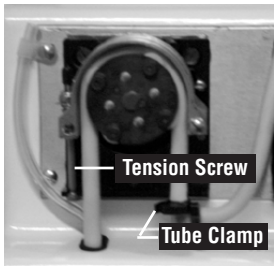


Release Spring Tension

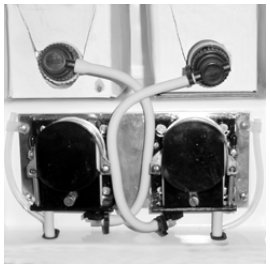

Remove Tubing



Lubricate New Tube



Install New Tubing


Completed Installation

## Troubleshooting

A troubleshooting guide is provided to suggest probable causes and remedies for the most likely problems encountered. If the problem remains after exhausting the troubleshooting steps, contact the Bunn-O-Matic Technical Service Department.

- Only qualified service personnel should perform inspection, testing, and repair of electrical equipment.
- Shorting the terminals or the application of external voltages to electronic components may result in component or circuit board failure.
- Intermittent operation of electronic circuit boards is unlikely. board failure will normally be permanent. If an intermittent condition is encountered, the cause will likely be a switch contact or a loose wire connection at a terminal or crimp.
- Solenoid removal requires interrupting the water supply to the valve. Damage may result if solenoids are energized for more than ten minutes without a supply of water.
- The use of two wrenches is recommended whenever plumbing fittings are tightened or loosened. This will help avoid twists and kinks in the tubing.
- Make certain that all plumbing connections are sealed and all electrical connections are tight and isolated.
- This dispenser is heated at all times. Keep away from combustibles.

**WARNING:**

- Exercise extreme caution when servicing electrical equipment.
- Disconnect the brewer from the power source when servicing, except when electrical tests are specified. The red "Power LED" on the door indicates that the unit is connected to AC Power.
- Follow recommended service procedures.
- Replace all protective shields or safety notices.

## Front Panel LED Display Messages

| | | |
|---|---|---|
| **Power LED "OFF"**<br>No AC Power | Dispenser Not plugged in.<br>AC Circuit Breaker OFF | Check Power Cord<br>Check the AC Power Circuit Breaker<br>Service Required |
| **Rinse LED "ON"**<br>Rinse Timer | Rinse Cycle Required | Rinse Dispenser, see *Rinse Procedure* |
| **Rinse LED "FLASHING"**<br>Rinse Lockout Enabled | Dispenser Locked Out<br>Rinse Cycle Required | Rinse Dispenser, see *Rinse Procedure* |
| **Portion LED "ON"**<br>Portion Dispense Enabled | Alternate Portion Dispenser Volume #2 has been selected | Activate the Dispenser within 5 sec. to dispense the pre-selected volume. |

## Troubleshooting (Continued)

| | | |
|---|---|---|
| **Left Refill LED "ON"**<br>Left BIB Empty | Concentrate BIB is Empty.<br>BIB Not properly connected<br>Tubing kinked or blocked<br>Empty BIB warning set too high | Replace BIB, see *Loading the Concentrate*<br>Check BIB Connector Fittings<br>Check Tubing Installation<br>Check Threshold, *see Field Calibrating the Emoty BIB Warning* |

| | | |
|---|---|---|
| **Right Refill LED "ON"**<br>Right BIB Empty | Concentrate BIB is Empty.<br>BIB Not properly connected<br>Tubing kinked or blocked<br>Empty BIB Warning set too high | Replace BIB, *see Loading the Concentrate*<br>Check BIB Connector Fittings<br>Check Tubing Installation<br>Check Threshold, see Field Calibrating the Empty BIB Warning |

| | | |
|---|---|---|
| **Left Refill LED "FLASHING"**<br>Empty BIB Lockout Enabled | Left Dispenser will not operate | Replace BIB, *see loading the Concentrate* |

| | | |
|---|---|---|
| **Left Refill LED "FLASHING"**<br>Empty BIB Lockout Enabled | Left Dispenser will not operate | Replace BIB, *see loading the Concentrate* |

| | | |
|---|---|---|
| **All LED's "FLASHING"**<br>Fault Detected | The Dispenser has detected an Internal Fault | Remove the lower splash guard to view the Fault message, See Diagnostics. After the fault has been repaired or corrected - Hold the "Stop" button for 10 seconds to clear the message. |

## Troubleshooting (Continued)

### Dispenser Diagnostics-LCD Display

| Screen Displayed | Possible Cause | Troubleshooting Procedures |
|---|---|---|
| LF TARGET RPM TOO HIGH !!<br> <br>TUBE TOO SMALL CHECK DISP RATIO | 1. The Tube Size selected for the Left Hand Dispenser is too small for the application.<br>2. The Ratio selected for the Left Hand Dispenser is not correct for the application. | Refer to “Selecting the Correct Pump Tubing” section of the manual.<br>Refer to recommended Dispense Ratio on the product label. |
| RT TARGET RPM TOO HIGH !!<br> <br>TUBE TOO SMALL CHECK DISP RATIO | 1. The Tube Size selected for the Right Hand Dispenser is too small for the application.<br>2. The Ratio selected for the Right Hand Dispenser is not correct for the application. | Refer to “Selecting the Correct Pump Tubing” section of the manual.<br>Refer to recommended Dispense Ratio on the product label. |
| LF TARGET RPM TOO LOW !!<br> <br>TUBE TOO LARGE CHECK DISP RATIO | 1. The Tube Size selected for the Left Hand Dispenser is too large for the application.<br>2. The Ratio selected for the Left Hand Dispenser is not correct for the application. | Refer to “Selecting the Correct Pump Tubing” section of the manual.<br>Refer to recommended Dispense Ratio on the product label. |
| RT TARGET RPM TOO LOW !!<br> <br>TUBE TOO LARGE CHECK DISP RATIO | 1. The Tube Size selected for the Right Hand Dispenser is too large for the application.<br>2. The Ratio selected for the Right Hand Dispenser is not correct for the application. | Refer to “Selecting the Correct Pump Tubing” section of the manual.<br>Refer to recommended Dispense Ratio on the product label. |
| LEFT BIB EMPTY!<br><br>REPLACE PRODUCT<br><br>CHECK THRESHOLD | 1. Concentrate BIB is Empty.<br>2. BIB Not properly connected.<br>3. Tubing kinked or blocked.<br>4. Empty BIB Warning set too high. | Replace BIB, *see loading the Concentrate*<br>Check BIB Connector Fittings<br>Check Tubing installation<br>Check Threshold, *see Field Calibrating the Empty BIB Warning* |
| RIGHT BIB EMPTY!<br><br>REPLACE PRODUCT<br><br>CHECK THRESHOLD | 1. Concentrate BIB is Empty.<br>2. BIB Not properly connected.<br>3. Tubing kinked or blocked.<br>4. Empty BIB Warning set too high. | Replace BIB, *see loading the Concentrate*<br>Check BIB Connector Fittings<br>Check Tubing installation<br>Check Threshold, *see Field Calibrating the Empty BIB Warning* |

## Troubleshooting (Continued)

| Screen Displayed | Possible Cause | Troubleshooting Procedures |
|---|---|---|
| LEFT PUMP FAULT!<br>CHK PUMP WIRING<br> <br>CHK RPM SENSOR<br>CHK TUBING AREA | 1. Motor failure<br><br>2. RPM Sensor failure | Service Required<br><br>Service Required |
| RT PUMP FAULT!<br>CHK PUMP WIRING<br> <br>CHK RPM SENSOR<br>CHK TUBING AREA | 1. Motor failure<br><br>2. RPM Sensor failure | Service Required<br><br>Service Required |

# Field Calibration of the Concentrate Pumps / Dispenser Flow Rates

The factory set Default Values for the Pump & Dispenser Flow Rates are very accurate and typically do not need to be field calibrated. However, if the mix ratio accuracy is ever in question, this procedure can be used to recalibrate the unit in the field.

Equipment Required:

50 to 100 ml graduated cylinder, with 1 ml graduations.

64 Oz (2000 ml) graduated container.

Remove the lower splash guard assembly to access prior to starting this procedure

**NOTE:** You can calibrate either the Concentrate Pump or the Dispenser Flow Rate independently. Simply scroll through the menu screen to the desired section and perform only those steps.

**Calibrating the Left Side Dispenser**

Concentrate Pump Calibration

1. Select PRIME on the Function Selector Switch. (refer to *Priming the Concentrate Lines*).
2. Place a container under the Left Dispense Tip and prime the concentrate lines until a steady stream of concentrate comes out the tip (approximately 10 seconds).
3. Stop the Priming and allow the tip to stop dripping. Discard the concentrate collected.
4. Select NORMAL on the Function Selector Switch.
5. Locate the programming module and use the Arrow Down key to scroll through LCD screens until CAL LEFT SIDE appears and press the YES button.
6. The CAL LEFT PUMP menu screen will be displayed. Place a 50 ml graduated cylinder under Left Dispense Tip and activate the Left Dispenser momentarily. The dispenser will run the Left Concentrate Pump for 20 seconds and then shut OFF automatically.
7. Keep the graduated cylinder under dispense tip until all the concentrate has dripped out.
8. Measure the volume of concentrate collected in the graduated cylinder.

Acceptable ranges for the volume collected

| Tubing Size | Volume Collected |
|---|---|
| 3/16” tubing | 40 - 47 ml. |
| 1/8” tubing | 17 - 22 ml |

9. If the amount collected is not within the acceptable range, empty the graduated cylinder and repeat STEPS 6 – 8.
10. If the amount collected is still not within range, replace the pump tubing with a new Tube Kit, (refer to the *Tube Replacement Instructions*).
11. When satisfied with the volume of concentrate collected, press the Down Arrow Key
12. The CAL LF PUMP VOL menu screen will be displayed. Use the (-) / (+) keys to adjust number displayed to the amount measured in STEP 8.

(Continued Next Page)

## Field Calibration of the Concentrate Pumps / Dispenser Flow Rates (Continued)

Dispenser Flow Rate Calibration

13. Press Down Arrow Key to display the CAL LF WTR FLO menu screen.
14. Place a 64 Oz (2000 ml) graduated container under Left Dispense Tip and Pull the Left Dispense Handle momentarily. The dispenser will dispense water for 20 seconds and then shut OFF automatically.
15. Keep the graduated container under dispense tip until all the water stops dripping.
16. Measure the volume of water collected in the graduated container.

Acceptable ranges for the volume collected

| Dispenser Flow Rate | Volume Collected |
|---|---|
| 1.8 Oz/sec (53 ml/sec) w/ flow restrictor | 32 - 38 Oz, (946 - 1124 ml) |

17. If the amount collected is not within the acceptable range, empty the graduated container and repeat STEPS 14 – 16
18. If the amount collected is still not within range, inspect the dispense valves, tubing and mix chamber for lime, kinks or other obstructions.
19. When satisfied with the volume of concentrate collected, press the Down Arrow Key.
20. The CAL LF WTR VOL screen will be displayed. Use the (-) / (+) keys to adjust number displayed to the amount measured in STEP 16.
21. Press Down Arrow Key again to exit the CAL LEFT SIDE functions.

**Calibrating the Right Side Dispenser**

Repeat STEPS 1-21 above for the "CAL RIGHT SIDE" menus.

## Field Calibrating the Empty BIB Warning

The dispenser will automatically turn on the Left or Right "REFILL LED", see *Operating Controls and Interface*, when the corresponding BIB is Empty. The Refill message is triggered when the FlavorGard™ sensor reading drops below the minimum setting. The factory set minimum is 250 and should be correct for most locations. However, in some areas the hardness of the local water supply may effect this reading. If the Refill message doesn't come on when the BIB is empty or the message comes on too early and there is still concentrate left in the BIB, use the following procedure to find the correct Empty BIB threshold.

**Calibrating The Empty BIB Threshold**

1. Remove the lower splash guard assembly to access the digital programming module with LCD display.
2. Open the cabinet door and set the Function Switch to the "Rinse" position. Close the door.
3. Place a large container under the Left dispenser tip, then activate and hold the left dispenser.
4. Dispense long enough to rinse all the concentrate out of the mix chamber and for the Conductance reading to stabilize and stop dropping.
5. Record the nominal Conductance value displayed. (NOTE: It is typical for this value fluctuate (+/- 25) points about the nominal value}. This is the conductance reading of the water in your area.
6. Repeat steps 3, 4 & 5 for the Right dispenser.
7. Add 100 points to the larger of the Left or Right side Conductance value. This is the new Empty BIB threshold value for your dispenser.
8. Enter this new value into the Empty BIB Alarm threshold, see *Programming the Dispenser*.

# SCHEMATIC WIRING DIAGRAM
# LCA-2 IC